

Abstract

In accordance with the present invention, the control over a high- speed non-linear actuator is improved by linearizing the relationship between the actuating impetus and the feedback control signal via a method that employs the separate and concurrent control of the static and dynamic characteristics of the device without resorting to the use of force-feedback or field-strength feedback. The resonant frequency of the plunger of the actuator is manipulated during operation such as to maintain it at a substantially fixed optimal value. The method is particularly advantageous in devices where space is at a premium and force-feedback or field-strength feedback mechanisms are difficult to implement.